

### Abstract of the Disclosure

A bias circuit includes a feedback amplifier, a current source, first and second differential transistors, first and second resistive transistors and first and second mirror transistors. The feedback amplifier compares a first reference voltage with a voltage on an internal node and outputs a feedback signal. The current source is controlled by the feedback signal. The first and second differential transistors are connected to the current source. The first and second differential transistors receive a second reference voltage. The second differential transistor has a dimension different from the first differential transistor. The first and second resistive transistors are connected to the first and second differential transistors respectively. The second resistive transistor has a first gate. Each of the first and second mirror transistors has a gate connected to the first gate. The first mirror transistor is connected to the internal node. The second mirror transistor is connected to an output node.